REMARKS

Claims 1 and 4-22 are currently pending in this application. Claim 1 has been amended to incorporate the elements of now canceled claims 2 and 3 and claim 23 has also been canceled without prejudice. Claims 4-22 have been amended to correct informalities. No new matter has been added.

In view of the above amendments and the remarks below, Applicants respectfully submit that the claims are allowable and the application is in condition for allowance.

Claim rejections under 35 U.S.C. § 102(b)

Claims 1-3, 5-7, 9, 10 and 14-18 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Schneider (EP 0442 026). Applicants respectfully disagree.

Claim 1 clearly differs from the teaching of Schneider since the claimed invention expressly requires in step (b) a filtering process in which the nucleic acid is **bound** to the porous matrix.

As described in Schneider col. 2, line 30 an ultrafiltration takes place and not binding of the nucleic acid to the porous matrix. Schneider requires a very specific silica material, namely a borosilicate glass. In addition, the filtered nucleic acid is no longer in its original form but instead is structurally changed due to the formation of a complex with the cationic detergent cetyltrimethyl ammonium bromide (CTAB, see Schneider col. 2, lines 22-36). The combination of the very specific glass material and the formation of a DNA-detergent complex *result in a lack of binding of the nucleic acid to the glass material.*

In the present invention, step (b) of claim 1 expressly requires that the lysate is filtered. However, in Schneider the lysate is first extracted using an organic solvent like chloroform

before the resulting mixture is contacted with the matrix (see Schneider col. 2, lines 14 to 15). As a result, the liquid phase is completely different from the lysate of the present invention.

Consequently, Schneider fails to disclose all of the elements recited in claim 1. Accordingly, it is respectfully submitted that claim 1 is novel over the cited prior art references. Claims 2 and 4-22, which depend from and further define the subject matter of claim 1 are therefore allowable.

Claims 1-10 and 17-22 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Colpan (US 6,277,648). Applicants respectfully disagree. However, claim 1 has been amended to recite the elements of original claims 2 and 3 and now recites in pertinent part, that **the nucleic acid is genomic DNA** and that the filtering step is **in the absence of a chaotropic salt**.

Colpan does not disclose a method in which the nucleic acid is genomic DNA *and* the filtering step is carried out **in the absence of a chaotropic salt** as recited in claim 1. As explained on page 1, lines 29-31 of the instant specification, the present invention provides "a simple method for isolating nucleic acid, which is both rapid and not depending on hazardous and expensive compounds, i.e. reagents like chaotropic salts and/or alcohols."

In contrast to the present invention, Colpan distinguishes between the isolation procedure of plasmids and genomic DNA. As is clear from the examples in Colpan, if genomic DNA is isolated, in all cases chaotropic agents (e.g. $NaClO_4$, guanidine-HCl)) are used (see Examples 10 and 11). This is expressly excluded in present claim 1.

Thus, Colpan fails to disclose all of the elements of claim 1. Accordingly, it is respectfully submitted that claim 1 is novel over the cited prior art references. Furthermore,

claims 4-22 depend from and further define the subject matter of claim 1 and therefore are also allowable.

Claim rejections under 35 U.S.C. § 103(a)

Claims 11-13

Claims 11-13 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Schneider. Separately, claims 11-13 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Colpan. The Examiner concedes that neither Schneider nor Colpan teach pore sizes between 0.3 and 3.2 microns as recited in claims 11-13 (see pages 4 and 5 of office action mailed September 20, 2009). Nonetheless, the Examiner asserts that it would have been obvious to one of ordinary skill in the art to use filters with different pore sizes in each of Schneider and Colpan. Applicants respectfully disagree with the rejections.

However, as discussed above, independent claim 1, (from which claims 11-13 depend) has been amended and now recites, in pertinent part, a method in which **nucleic acid is bound to the porous matrix, the isolated nucleic acid is genomic DNA** and the filtering step is carried out in **the absence of a chaotropic salt.** Neither Schneider nor Colpan teach or suggest all of the elements of claim 1.

Furthermore, the processes described in Schneider and Colpan are completely different than the one presently claimed and a person having ordinary skill in the art would not have found it obvious to modify Schneider or Colpan to achieve the method recited in claim 1.

Schneider

As discussed above in reference to the rejection under 35 U.S.C. § 102, Schneider uses a very specific precipitation and ultrafiltration mechanism which would structurally change nucleic

acid during the precipitation step. According to Schneider's method, the filtered nucleic acid is no longer in its original form but instead is structurally changed due to the formation of a complex with the cationic detergent cetyltrimethyl ammonium bromide (CTAB, see Schneider col. 2, lines 22-36).

Moreover, the present invention, step (b) of claim 1 expressly requires that the lysate is filtered. However, in Schneider the lysate is first extracted using an organic solvent like chloroform before the resulting mixture is contacted with the matrix (see Schneider col. 2, lines 14 to 15). As a result, the liquid phase is completely different from the lysate of the present invention.

Thus, Schneider *teaches away* from the present invention which provides a simple, rapid and low cost method for isolating nucleic acids, (see specification, page 1, line 29 to page 2, line 5).

Accordingly, claim 1 is allowable over Schneider. Furthermore, claims 4-22 (including claims 11-13) depend from and further define the subject matter of amended claim 1 and therefore are also allowable.

Colpan

Colpan describes methods which use chaotropic substances, which claim 1 expressly excludes. Moreover, as plasmids and genomic DNA are structurally very different, their isolation behavior therefore is also quite different. As such, a skilled person would not have tried to modify a plasmid isolation procedure of Colpan into a genomic DNA isolation procedure as recited in amended claim 1.

Therefore, a person having ordinary skill in the art would not have found it obvious to modify Schneider of Colpan in such a manner as to achieve the method as recited in amended claim 1.

Accordingly, claim 1 is allowable over the cited prior art references. Furthermore, claims 4-22 (including claims 11-13) depend from and further define the subject matter of amended claim 1 and therefore are also allowable.

Claim 23

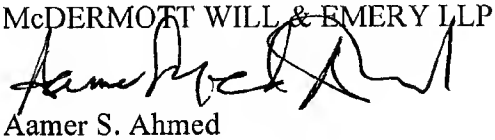
Claim 23 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Schneider in view of Stratagene Catalog and also Colpan in view of Stratagene Catalog. **These rejections are rendered moot in view of the cancellation of claim 23.**

In view of the above amendments and remarks, Applicants submit that this application should be allowed and the case passed to issue. If there are any questions regarding this Amendment or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP



Aamer S. Ahmed
Registration No. 58,958

600 13th Street, N.W.
Washington, DC 20005-3096
Phone: 202.756.8000 ASA::ajb
Facsimile: 202.756.8087
Date: March 1, 2010

Please recognize our Customer No. 20277 as our correspondence address.